

## Ch2 Quadratics

- Expansion (Factored to Standard Form)
- Factoring Trinomials (Roots)

Handout exam topic sheet

Jun 2-8:15 AM

Factored

$$y = a(x-s)(x-t)$$

read zeros directly

$-5, +2$

$\frac{s+t}{2} \Rightarrow \frac{-5+2}{2} = -\frac{3}{2}$

Sub  $x = -\frac{3}{2}$

into  $(x+5)(x-2)$

$(-\frac{3}{2}, 1)$   
 $(-\frac{3}{2}, -\frac{49}{4})$

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g)  $a(a-5) = 0$

$0 \quad 5$

$a(x-s)(x-t) = 0$

h)  $(4x+3)(5x-2) = 0$

$-\frac{3}{4} \quad \frac{2}{5}$

Zeros - When ball hits the ground  
- breakeven for a business

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State the zeros

$$(5x-3)(2x+7) = 0$$

$+\frac{3}{5} \quad -\frac{7}{2}$

$2x+7 = 0$   
 $2x = -7$   
 $x = -\frac{7}{2}$

$$(-2x+4)(3x-5) = 0$$

$-\frac{4}{-2} \quad +\frac{5}{3}$   
 $+2, +\frac{5}{3}$

Jan 10-10:08 AM

## Expand

$$(x+5)(x-2) = f(x)$$

$$x^2 - 2x + 5x - 10 = f(x)$$

$$x^2 + 3x - 10 = f(x)$$

To find a pt [roots]

STANDARD FORM-Allows you  
to substitute or  
Solve for a specific pt.

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Distributive Property

$$3x(x+5) - 2x(x+2) + 3x = 0$$

$$3x^2 + 15x - 2x^2 - 4x + 3x = 0$$

$$x^2 + 14x = 0$$

$$3(x+2)(x-4) = 0$$

FOIL FIRST

$$3[x^2 - 4x + 2x - 8] = 0$$

$$3[x^2 - 2x - 8] = 0$$

$$3x^2 - 6x - 24 = 0$$

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Factor

$$n^2 + 7n - 30 = 0$$

$$n^2 + 10n - 3n - 30 = 0$$

$$n(n+10) - 3(n+10) = 0$$

$$(n+10)(n-3) = 0$$

-10, +3

Decomposition

A	M
+7	-30
	30
2	15
-3	+10

axc

A	M
+9	+8
	8
	1

$$2y^2 + 9y + 4 = 0$$

$$2y^2 + 8y + 4y + 4 = 0$$

$$2y(y+4) + 1(y+4) = 0$$

$$(y+4)(2y+1) = 0$$

-4, -1/2

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$$\sqrt{y^2 - 25} = 0$$

$$(y - 5)(y + 5) = 0$$

Difference of Squares

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$$\sqrt{y^2 + 10y + 25} = 0$$

$$(y + 5)^2 = 0$$

$\sqrt{a} \sqrt{c} \times 2$   
= b  
 $y(5) \times 2$   
= 10

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$$9y^2 + 24y + 16 = 0$$

$$(3y + 4)^2 = 0$$

$4 \times 3y \times 2$

-4/3

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6 a)  $y = x^2 - x - 30$   $y = -24$

$$-24 = x^2 - x - 30$$

$$0 = x^2 - x - 30 + 24$$

$$0 = x^2 - x - 6$$

$$x^2 + 2x - 3x - 6$$

$$x(x+2) - 3(x+2)$$

$$(x+2)(x-3)$$

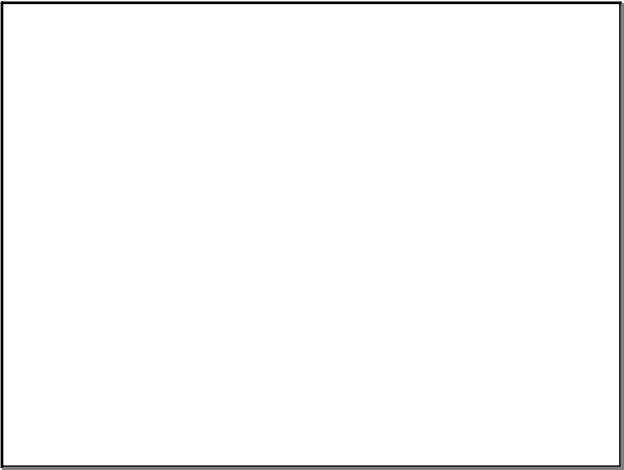
$(-2, -24)(3, -24)$

A	M
-1	-6
	3
+2	-3

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Please Complete  
q. 1, 3-6, 9, 11-13, 16, & 18  
p 120 & 121

Jun 2-10:18 AM



Jun 5-4:18 PM